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# PROCEEDINGS OF SPIE

## ***Advances in Optical Thin Films IV***

**Michel Lequime**  
**H. Angus Macleod**  
**Detlev Ristau**  
*Editors*

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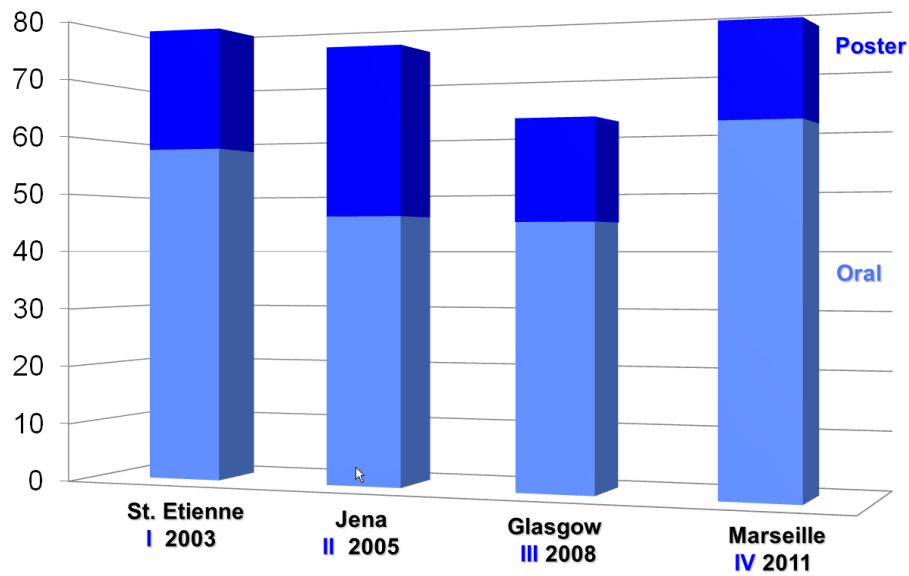
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- 4 Applications  
**Mireille Commandré**, Institut Fresnel (France)  
**Ulrike Schulz**, Fraunhofer-Institut für Angewandte Optik und  
Feinmechanik (Germany)
- 5 Deposition Processes  
**Angela M. Piegari**, ENEA (Italy)  
**Juan Ignacio Larruquert**, Consejo Superior de Investigaciones  
Científicas (Spain)
- 6 Thin-film Materials  
**Xu Liu**, Zhejiang University (China)  
**Ronald R. Willey**, Willey Optical (United States)
- 7 Filters and Manufacturing  
**Frank Placido**, University of the West of Scotland (United Kingdom)  
**Ludvik Martinu**, Ecole Polytechnique de Montréal (Canada)
- 8 Characterization  
**Norbert Kaiser**, Fraunhofer-Institut für Angewandte Optik und  
Feinmechanik (Germany)  
**Franck Delmotte**, Institut d'Optique Graduate School (France)
- 9 Soft X-ray/EUV/DUV/VUV Coatings  
**Ulrike Schulz**, Fraunhofer-Institut für Angewandte Optik und  
Feinmechanik (Germany)  
**Ric P. Shimshock**, MLD Technologies, LLC (United States)
- 10 Process Control and Monitoring  
**Claude Amra**, Institut Fresnel (France)  
**Carl G. Ribbing**, Uppsala University (Sweden)
- 11 1D Photonic Crystals and Metamaterials  
**H. Angus Macleod**, Thin Film Center, Inc. (United States)  
**Detlev Ristau**, Laser Zentrum Hannover e.V. (Germany)

## Introduction

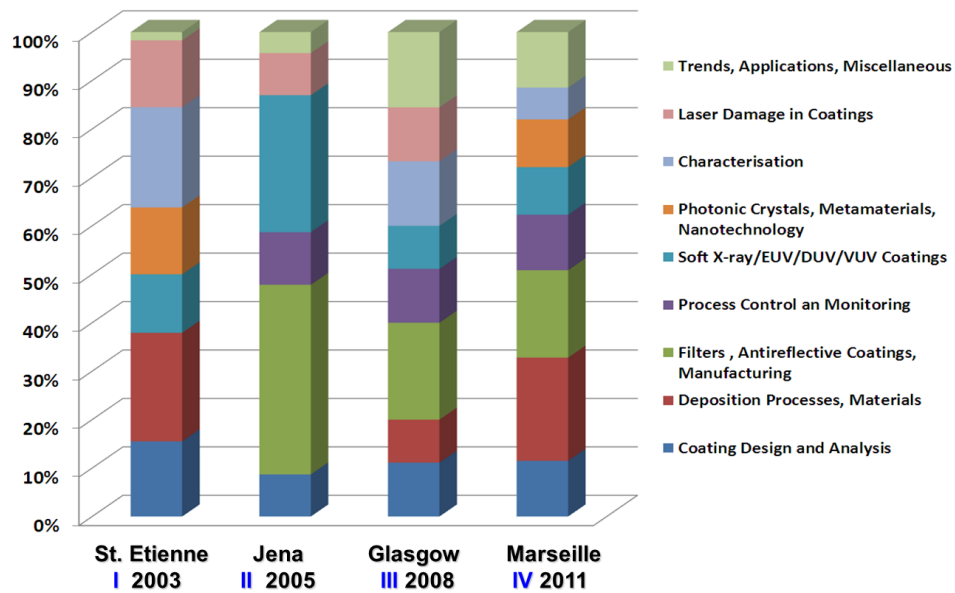
The conference on Advances in Optical Thin Films stands in a long tradition of events dedicated to optical coatings organised within SPIE symposia for many years. The present conference is the fourth in a row which started in St. Etienne in 2003 and was continued in Jena, 2005, as well as Glasgow, 2008, within the framework of SPIE Optical Systems Design. The present conference, located in the city of Marseille near the Vieux Port, again reflects recent trends in optical coating technology and gives a comprehensive overview on state of the art developments in the field. This is clearly demonstrated by the number of nearly 80 presenters who contributed to this conference (fig. 1), a high level as in Jena 2005 and St. Etienne 2003. In this context, the slightly lower number of publications in Glasgow may be attributed the economic recession at that time. During the conference, sessions were concentrated on antireflective coatings, coating design and analysis, applications, deposition processes, thin-film materials, filters and manufacturing, characterization, soft x-ray/EUV/DUV/VUV coatings, and process control and monitoring, as well as 1D photonic crystals and metamaterials. In this constellation (fig. 2) the conference offered a broad range of topics and gathered scientific work in many areas of optical thin film technology. Considering further statistics, the conference was attended by more 150 scientists and benefitted from the framework of the Optical Systems Design symposium.

The internationality of the conference has always been extensively supported by the international program committee, representing research activities in different countries. Presently, the international program committee consists of representatives from France, the United States, Germany, Spain, China, Canada, Italy, the United Kingdom, Sweden, Russia, and Croatia. The engagement of the international program committee, which initiated participation from more than 20 countries during recent years, is acknowledged here as being very important. An especially interesting and encouraging development was the Chinese scientific community and its rank of third in countries contributing to this conference. This increase clearly indicates the enormous growth and progress of the scientific activities in the Pacific Rim and promises even more advances in thin film technology for the near future. Only France and Germany supported the conference by a higher number of publications which were also driven by many industrial research programs as well as by new aspects of fundamental research. The conference proceedings published by SPIE illustrate the enormous vitality of the field and can be considered an important resource compiled in the optical coating area. The tremendous efforts of the authors to prepare the manuscripts and posters are gratefully acknowledged here.

Much of the success of the meeting can be attributed to the tireless efforts of the SPIE staff, as well as many others working hard to support the conference. The organizers also appreciate the cosponsors: Marseille Provence Metropole, POP Sud, Ville de Marseille, and Schott.



**Figure 1:** Number of oral and poster presentation contributed the Conference "Advances in Optical Thin Films"



**Figure 2:** Percentage of oral presentation contributed to topics of the Conference

Michel Lequime  
H. Angus Macleod  
Detlev Ristau